

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB2005/000968

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F16L11/08 F16L11/24 F16L55/1645

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 428 507 A (ERIC BALL) 18 February 1969 (1969-02-18) column 1, lines 25-27 - column 4, lines 42,43; figure 5 -----	1-12
X	US 3 957 085 A (BALL ET AL) 18 May 1976 (1976-05-18) columns 1-2, lines 54-20; figure 1 -----	1-12
X	GB 2 303 574 A (* DUNLOP LIMITED; * HIFLEX FLUIDHANDLING GROUP LIMITED) 26 February 1997 (1997-02-26) figures 2-4 -----	1-12
X	WO 03/014613 A (NOVALINER TECHNOLOGIES INC; PARE, PIERRE) 20 February 2003 (2003-02-20) claims 20-22,24 -----	13-16, 22-24

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

27 September 2005

Date of mailing of the international search report

15.11.05

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### Box II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
1-24
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

☒ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

## 1. claims: 1-12

A composite lining for a pipe comprising: a structural layer for providing structural integrity; and a containment layer for providing fluid impermeability; wherein, the structural layer comprises at least one strip of lining material arranged to form a substantially continuous lining within said pipe.

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## 2. claims: 13-24

A method of lining a pipe comprising: lining said pipe with a structural layer for providing structural integrity; and lining said pipe with a containment layer for providing fluid impermeability; wherein, lining said pipe with a structural layer comprises arranging said structural layer to form a substantially continuous lining within said pipe.

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## 3. claim: 25

A test structure for testing the fluid impermeability of a tubular containment layer of a composite lining according to any of claims 2 to 11 comprising: a seam along a longitudinal length of said containment layer, the seam comprising at least two substantially parallel seamed regions; and a conduit formed between said seamed regions.

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## 4. claim: 26

A method for testing the fluid impermeability of a tubular containment layer of a composite lining according to any of claims 2 to 11 comprising: providing said containment layer with a seam along a longitudinal length of said containment layer, the seam comprising at least two substantially parallel seamed regions; and a conduit formed between said seamed regions; pressurising said conduit with a fluid; determining if said fluid is leaking from either of said parallel seamed regions.

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## 5. claim: 27

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An apparatus for providing a loosely twisted helical strip of lining material for lining a pipe, the apparatus comprising: a base portion; and coil support means rotatably mounted on said base portion for supporting a coil of said lining material and for allowing a strip of said lining material to be dispensed from said coil; the coil support means being rotatable in a controlled manner relative to said base portion for inducing helical twists in said strip of lining material.

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6. claim: 32

An apparatus for helically lining a pipe with a strip of lining material, the apparatus comprising: winding rig comprising helical winding means; said helical winding means being configured for helically winding said strip into a helically wound lining layer for lining an inside surface either of said pipe or of a previously laid lining layer

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7. claim: 37

An apparatus for lining a pipe with a tubular containment layer.

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8. claim: 39

A welding apparatus.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern Application No  
PCT/GB2005/000968

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3428507	A	18-02-1969	BE 664164 A DE 1475569 A1 DK 128296 B ES 313103 A1 FR 1442583 A GB 1033547 A NL 6506378 A SE 329527 B	16-09-1965 16-01-1969 01-04-1974 16-12-1965 05-10-1966 22-06-1966 22-11-1965 12-10-1970
US 3957085	A	18-05-1976	NONE	
GB 2303574	A	26-02-1997	AU 6526096 A CA 2200736 A1 EP 0782502 A1 WO 9703815 A1	18-02-1997 06-02-1997 09-07-1997 06-02-1997
WO 03014613	A	20-02-2003	CA 2451390 A1	20-02-2003